Attorney Docket: 46107-0098 Serial No. 10/723,097 Reply to Notice of Allowance dated February 23, 2005

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0009] with the following amended paragraph:

[0009] In yet another embodiment of this invention, [[A]] a computer system for performing an engine diagnostic routine includes a memory containing a program which performs the steps of detecting an ionization signal; integrating the ionization signal over a first sampling window to generate a first integration ionization value; detecting a peak of the ionization signal over the first sampling window to generate a first peak ionization value; integrating the ionization signal over a second sampling window to generate a second integration ionization value; detecting a peak of the ionization signal over a second sampling window to generate a second peak ionization value; and performing the engine diagnostic routine with at least one of the first integration ionization value, the first peak ionization value, the second integration ionization value, and the second peak ionization value; and a processor for running the program.